AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1 – 78. (cancelled without prejudice)

79. (previously presented) A method of building predictive models from transaction data, comprising:

aggregating data from a plurality of transaction systems covering a series of time periods for one or more elements and one or more outputs;

transforming said element data in accordance with one or more pre-programmed functions;

establishing a plurality of input nodes, a plurality of hidden nodes and an output node for a neural network model for each output;

inputting the raw and transformed transaction data into each neural network model using a separate input node for untransformed transaction data and each pre-programmed transformation function by element for all time periods in the series;

training each neural network model using said inputs until an error function associated with an output value is minimized; and

using one or more weights from the trained neural network models to identify a set of raw and transformed transaction data by element and output that will be used as an input to one or more predictive models.

80. (previously presented) The method of claim 79 where a plurality of input nodes is set equal to one plus the number of elements times one plus the number of pre-programmed functions used to transform transaction data.

81. (previously presented) The method of claim 79 where a plurality of hidden nodes is set equal to one plus the number of input nodes.

82. (previously presented) The method of claim 79, where an error function further comprises ERR $(W)_k = 1/2 (R_k - Y(W))^2$.

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83. (previously presented) The method of claim 79 where a set of raw and transformed transaction data that will be used as an input to a predictive model further comprises a set of numbers.

84. (previously presented) The method of claim 79 where one or more predictive models further comprises one or more neural network models.

85. (previously presented) The method of claim 79 where training a neural network model further comprises using a genetic algorithm to complete the training.

86. (previously presented) The method of claim 79 where training a neural network model further comprises using a back propagation algorithm to complete the training.

87. (previously presented) The method of claim 79 where one or more elements further comprise one or more elements of value.

88. (previously presented) The method of claim 79 where one or more outputs further comprise one or more components of value.

89. (previously presented) The method of claim 79 where a series of time periods contains time periods selected from the group consisting of historical time periods, future time periods and combinations thereof.

90. (previously presented) The method of claim 79 where the one or more pre programmed functions are selected from the group consisting of average, rolling average, time delay, trend, average time delay, rolling average time delay, ratio, average ratio, rolling average ratio, slope, average slope, rolling average slope and combinations thereof.

91. (previously presented) The method of claim 79 that further comprises:
    normalizing one or more sets of raw and transformed transaction data by element,
    refining the sets of raw and transformed transaction data by element,
    creating a summary of the refined transaction data set for each element, and
    using the element summaries as inputs to a predictive model.

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92. (previously presented) A computer readable medium of building predictive models from transaction data, comprising:

aggregating data from a plurality of transaction systems covering a series of time periods for one or more elements and one or more outputs;

transforming said element data in accordance with one or more pre-programmed functions;

establishing a plurality of input nodes, a plurality of hidden nodes and an output node for a neural network model for each output;

inputting the raw and transformed transaction data into each neural network model using a separate input node for untransformed transaction data and each pre-programmed transformation function by element for all time periods in the series;

training each neural network model using said inputs until an error function associated with an output value is minimized; and

using one or more weights from the trained neural network models to identify a set of raw and transformed transaction data by element and output that will be used as an input to one or more predictive models.

93. (previously presented) The computer readable medium of claim 92 where a plurality of input nodes is set equal to one plus the number of elements times one plus the number of pre-programmed functions used to transform transaction data.

94. (previously presented) The computer readable medium of claim 92 where a plurality of hidden nodes is set equal to one plus the number of input nodes.

95. (previously presented) The computer readable medium of claim 92, where an error function further comprises ERR $(W)_k = 1/2 (R_k - Y(W))^2$.

96. (previously presented) The computer readable medium of claim 92 where a set of raw and transformed transaction data that will be used as an input to a predictive model further comprises a set of numbers.

97. (previously presented) The computer readable medium of claim 92 where one or more predictive models further comprises one or more neural network models.

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98. (previously presented) The computer readable medium of claim 92 where training a neural network model further comprises using a genetic algorithm to complete the training.

99. (previously presented) The computer readable medium of claim 92 where training a neural network model further comprises using a back propagation algorithm to complete the training.

100. (previously presented) The computer readable medium of claim 92 where one or more elements further comprise one or more elements of value.

101. (previously presented) The computer readable medium of claim 92 where one or more outputs further comprise one or more components of value.

102. (previously presented) The computer readable medium of claim 92 where a series of time periods contains time periods selected from the group consisting of historical time periods, future time periods and combinations thereof.

103. (previously presented) The computer readable medium of claim 92 where the one or more pre programmed functions are selected from the group consisting of average, rolling average, time delay, trend, average time delay, rolling average time delay, ratio, average ratio, rolling average ratio, slope, average slope, rolling average slope and combinations thereof.

104. (previously presented) The computer readable medium of claim 92 where the method further comprises:
    normalizing one or more sets of raw and transformed transaction data by element,
    refining the sets of raw and transformed transaction data by element,
    creating a summary of the refined transaction data set for each element, and
    using the element summaries as inputs to a predictive model.

105. (previously presented) An apparatus for building predictive models from transaction data, comprising:
    a plurality of transaction systems,

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means for preparing data from said systems for use in processing for a series of time periods for one or more elements and one or more outputs;

means for transforming said element data in accordance with one or more pre-programmed functions;

means for establishing a plurality of input nodes, a plurality of hidden nodes and an output node for a neural network model for each output;

means for inputting the raw and transformed transaction data into each neural network model using a separate input node for untransformed transaction data and each pre-programmed transformation function by element for all time periods in the series;

means for training each neural network model using said inputs until an error function associated with an output value is minimized; and

means for using one or more weights from the trained neural network models to identify a set of raw and transformed transaction data by element and output that will be used as an input to one or more predictive models.

106. (previously presented) The apparatus of claim 105 where a plurality of input nodes is set equal to one plus the number of elements times one plus the number of pre-programmed functions used to transform transaction data.

107. (previously presented) The apparatus of claim 105 where a plurality of hidden nodes is set equal to one plus the number of input nodes.

108. (previously presented) The apparatus of claim 105, where an error function further comprises ERR $(W)_k = 1/2 \, (R_k - Y(W))^2$.

109. (previously presented) The apparatus of claim 105 where a set of raw and transformed transaction data that will be used as an input to a predictive model further comprises a set of numbers.

110. (previously presented) The apparatus of claim 105 where one or more predictive models further comprises one or more neural network models.

111. (previously presented) The apparatus of claim 105 where training a neural network model further comprises using a genetic algorithm to complete the training.

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112. (previously presented) The apparatus of claim 105 where training a neural network model further comprises using a back propagation algorithm to complete the training.

113. (previously presented) The apparatus of claim 105 where one or more elements further comprise one or more elements of value.

114. (previously presented) The apparatus of claim 105 where one or more outputs further comprise one or more components of value.

115. (previously presented) The apparatus of claim 105 where a series of time periods contains time periods selected from the group consisting of historical time periods, future time periods and combinations thereof.

116. (previously presented) The apparatus of claim 105 where the one or more pre programmed functions are selected from the group consisting of average, rolling average, time delay, trend, average time delay, rolling average time delay, ratio, average ratio, rolling average ratio, slope, average slope, rolling average slope and combinations thereof.

117. (previously presented) The apparatus of claim 105 where preparing data for use in processing further comprises integrating, converting and storing data from a plurality of systems in accordance with a common data dictionary.

118. (previously presented) The apparatus of claim 105 that further comprises:
   means for normalizing one or more sets of raw and transformed transaction data by element,
   means for refining the sets of raw and transformed transaction data by element,
   means for creating a summary of the refined transaction data set for each element, and
   means for using the element summaries as inputs to a predictive model.

119. (new) A data processing method, comprising:
   organizing business transaction data by enterprise into one or more components of value and two or more elements of value where at least one element of value is intangible;

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determining a relative contribution of each of two or more elements of value to a value of a business by analyzing at least a portion of the data; and

reporting the relative contribution of each element of value and the value of the business.

120. (new) The data processing method of claim 119 wherein determining a relative contribution for each of the two or more elements to a value of the business further comprises:

deriving an element of value weighting factor for each element of value by enterprise; and

weighting the data concerning each of one or more elements of value according to the element of value weighting factors for each enterprise, where the relative value contribution is the sum of the weighted element of value data for all enterprises within the business.

121. (new) The data processing method of claim 119 wherein the intangible elements of value are selected from the group consisting of brands, customers, employees, partners, vendors and combinations thereof.

122. (new) The data processing method of claim 119 wherein reporting the value of the business and the relative contribution by element of value further comprises the use of a paper document or an electronic display.

123. (new) The data processing method of claim 119 wherein a value of the business is market value.

124. (new) The data processing method of claim 119 wherein at least one of the two or more elements of value contain items that are optionally clustered into sub-elements of value for more detailed analysis.

125. (new) The data processing method of claim 119 wherein transaction data is obtained from the group consisting of advanced financial systems, basic financial systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset

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systems, inventory systems, invoicing systems, payroll systems, purchasing systems and combinations thereof.

126. (new) The data processing method of claim 119 wherein at least a portion of the data is obtained from the Internet.

127. (new) The data processing method of claim 119 wherein an enterprise is defined by a revenue component of value together with an optional component of value selected from the group consisting of expense, capital change and combinations thereof.

128. (new) The data processing method of claim 119 wherein a revenue component of value that defines an enterprise can include the revenue from a single product, a group of products, a division or an entire company.

129. (new) The data processing method of claim 119 wherein each of one or more components of value can be divided into subcomponents of value for more detailed analysis.

130. (new) The data processing method of claim 119 wherein a relative contribution for each element of value further comprises a relative contribution for a specified point in time within a sequential series of points in time.

131. (new) The data processing method of claim 119 wherein a relative contribution of each element of value to a value of a business is determined by a relative impact of the element of value on the components of value and the other elements of value by enterprise.

132. (new) The data processing method of claim 120 wherein deriving one or more element of value weighting factors further comprises:
  determining an initial weighting factor with a predictive neural network model; and
  finalizing the element of value weighting factors with a model selected from the group consisting of entropy minimization, lagrange and path analysis.

133. (new) The data processing method of claim 132 wherein the method further comprises using genetic algorithms to evolve each model to an optimal configuration before completing each method step.

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134. (new) A program storage device having sequences of instructions stored therein, which when executed causes the processor in a computer to perform a data processing method, comprising:

organizing business data by enterprise into one or more components of value and two or more elements of value where at least one element of value is intangible;

determining a relative contribution of each of two or more elements of value to a value of the business by analyzing at least a portion of the data; and

reporting the relative contribution of each element of value and the value of the business.

135. (new) The program storage device of claim 134 wherein determining a relative contribution for each of the two or more elements to a value of the business further comprises:

deriving an element of value weighting factor for each element of value by enterprise; and

weighting the data concerning each of one or more elements of value according to the element of value weighting factors for each enterprise, where the relative value contribution is the sum of the weighted element of value data for all enterprises within the business.

136. (new) The program storage device of claim 134 wherein an intangible element of value is selected from the group consisting of brands, customers, employees, partners, vendors and combinations thereof.

137. (new) The program storage device of claim 134 wherein reporting the value of the business and the relative contribution by element of value further comprises the use of a paper document or an electronic display.

138. (new) The program storage device of claim 134 wherein a value of the business is market value.

139. (new) The program storage device of claim 134 wherein at least one of the two or more elements of value contain items that are optionally clustered into sub-elements of value for more detailed analysis.

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140. (new) The program storage device of claim 134 wherein transaction data is obtained from the group consisting of advanced financial systems, basic financial systems, operation management systems, sales management systems, human resource systems, accounts receivable systems, accounts payable systems, capital asset systems, inventory systems, invoicing systems, payroll systems, purchasing systems and combinations thereof.

141. (new) The program storage device of claim 134 wherein at least a portion of the data is obtained from the Internet.

142. (new) The program storage device of claim 134 wherein an enterprise is defined by a revenue component of value together with an optional component of value selected from the group consisting of expense, capital change and combinations thereof.

143. (new) The program storage device of claim 134 wherein a revenue component of value that defines an enterprise can include the revenue from a single product, a group of products, a division or an entire company.

144. (new) The program storage device of claim 134 wherein each of one or more components of value can be divided into subcomponents of value for more detailed analysis.

145. (new) The program storage device of claim 134 wherein a relative contribution for each element of value further comprises a relative contribution for a specified point in time within a sequential series of points in time.

146. (new) The program storage device of claim 134 wherein a relative contribution of each element of value to a value of a business is determined by a relative impact of the element of value on the components of value and the other elements of value by enterprise.

147. (new) The program storage device of claim 135 wherein deriving one or more element of value weighting factors further comprises:
    determining an initial weighting factor with a predictive neural network model; and
    finalizing the element of value weighting factors with a model selected from the group consisting of entropy minimization, lagrange and path analysis.

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148. (new) The program storage device of claim 147 wherein the method further comprises using genetic algorithms to evolve each model to an optimal configuration before completing each method step.

149. (new) A financial system, comprising:

networked computers each with a processor having circuitry to execute instructions; a storage device available to each processor with sequences of instructions stored therein, which when executed cause the processors to:

integrate transaction data from a plurality of enterprise management systems,

analyze at least a portion of the integrated data to identify one or more events that drive enterprise value creation and a business context that is associated with said events, and

using transaction data associated with said events to develop a computational model of enterprise financial performance.

150. (new) The system of claim 149 wherein a computational model further comprises up to three network component of value models where a plurality of tangible and intangible elements of value are connected to a level of each component of value over time and where automated analysis through computational techniques is supported.

151. (new) The system of claim 149 wherein a computational model further comprises a causal model that supports automated analysis through computational techniques.

152. (new) The system of claim 149 wherein one or more intangible elements of value are selected from the group consisting of brands, customers, employees, intellectual capital, partners, vendors, vendor relationships and combinations thereof.

153. (new) The system of claim 149 wherein one or more tangible elements of value further comprise production equipment.

154. (new) The system of claim 149 where one or more components of value are selected from the group consisting of revenue, expense, capital change and combinations thereof.

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155. (new) The system of claim 149 that produces useful results selected from the group consisting a valuation for one or more elements of value, an impact quantification for one or more elements of value, one or more financial performance forecasts that do not require reconciliation, one or more forecasts of the expected impact of change to an element value driver and combinations thereof.

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